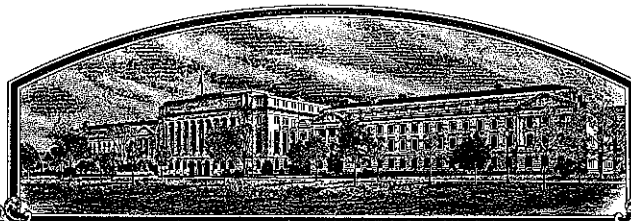


No.

9800370



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Western Plant Breeders, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREBY ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Sharpshooter'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this thirty-first day of January, in the year of our Lord two thousand.

Attest:

Ann Marie
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

John G. Dickinson
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) Western Plant Breeders, Inc.		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER SS-1, FA 994-601		3. VARIETY NAME Sharpshooter	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 8111 Timberline Drive Bozeman, MT 59718-8184		5. TELEPHONE (include area code) (406) 587-1218		FOR OFFICIAL USE ONLY PVPO NUMBER 9800370 DATE 8-31-98 FILING AND EXAMINATION FEE: \$ 2450.00 DATE Aug 31, 1998 CERTIFICATION FEE: \$ 300.00 DATE Sept. 20, 99	
		6. FAX (include area code) (406) 586-8247			
7. GENUS AND SPECIES NAME Triticum aestivum		8. FAMILY NAME (Botanical) Poaceae			
9. CROP KIND NAME (Common name) Common Wheat					
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common name) Corporation					
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Arizona			12. DATE OF INCORPORATION Aug. 24, 1990		
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Dr. Greg Fox Western Plant Breeders, Inc. 717 14th Street South Fargo, ND 58103				14. TELEPHONE (include area code) (701) 293-5146	
				15. FAX (include area code) (701) 293-5146	
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)					
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Applicant's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to PVPO)					
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "yes," answer items 18 and 19 below) <input checked="" type="checkbox"/> NO (If "no," go to item 20)					
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED		
20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES (If "yes," give names of countries and dates) <input type="checkbox"/> NO USA April 1998					
21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF APPLICANT (Owner(s)) Gregory J. Fox			SIGNATURE OF APPLICANT (Owner(s)) Dan. R. Biggerstaff		
NAME (Please print or type) Gregory J. Fox			NAME (Please print or type) Dan. R. Biggerstaff		
CAPACITY OR TITLE Special Projects Breeder		DATE 21 Aug 98		CAPACITY OR TITLE General Manager	
				DATE 28 Aug 98	

16.a.Exhibit A. Origin and Breeding History

per phone call of 8/11/99 mark 8/11/99

Sharpshooter is a hard red spring wheat adapted to the Northern Great Plains region of North America, that was developed by Western Plant Breeders. Sharpshooter is an F3 derived selection from the cross Sharpshooter x Sumi-3 made in the growth chamber in January 1994. Sumi-3 is a spring wheat variety from China used as a donor of resistance/tolerance to scab (*Fusarium graminearum*). Throughout the F2, F3, F4, and F5 generations (all in growth chambers), selection was directed toward a Sharp plant and seed type with the scab resistance of Sumi-3. In the development of Sharpshooter, a single F3 plant, of the Sharp phenotype with Sumi-3 scab resistance, was selected. In the F4 generation, 6 plants were selected; in the F5 generation, 32 plants were selected. These 32 plant selections were planted in the field near Yuma, AZ, in the fall of 1994 for field evaluation and increase. Uniform F6 rows were harvested in April of 1995, and seed of these were planted in long plots near Fisher, MN, in May of 1995. Uniform, scab-tolerant lines were harvested separately and planted separately near Yuma, AZ, on approximately 28 acres in the fall of 1995. The intent was to harvest this F7 material as Foundation seed in the spring of 1996 and plant 1500 acres of seed production in Minnesota in May of 1996. Due to the discovery of Karnal bunt in Arizona in March of 1996, and the resulting quarantine, this was not possible. Approximately 3000 pounds of this production was harvested, tested to be free of Karnal bunt, split into 300 ten pound lots, washed in a chlorox solution, rinsed, and treated with two fungicides. This seed was designated Breeders Seed, shipped to Bozeman, MT, and planted June 3, 1996, on approximately 18 acres. Seed from this field was harvested as Foundation seed in the fall of 1996. Foundation seed was planted in the Cochilla Valley near Indio, CA, (outside the quarantine area) in the fall of 1996 to produce Registered seed. The Registered seed was harvested in early May of 1997 and planted in Minnesota the same month. Seed produced from these fields was designated Certified seed. Certified seed of Sharpshooter was first available to growers in Minnesota and North Dakota in the spring of 1998.

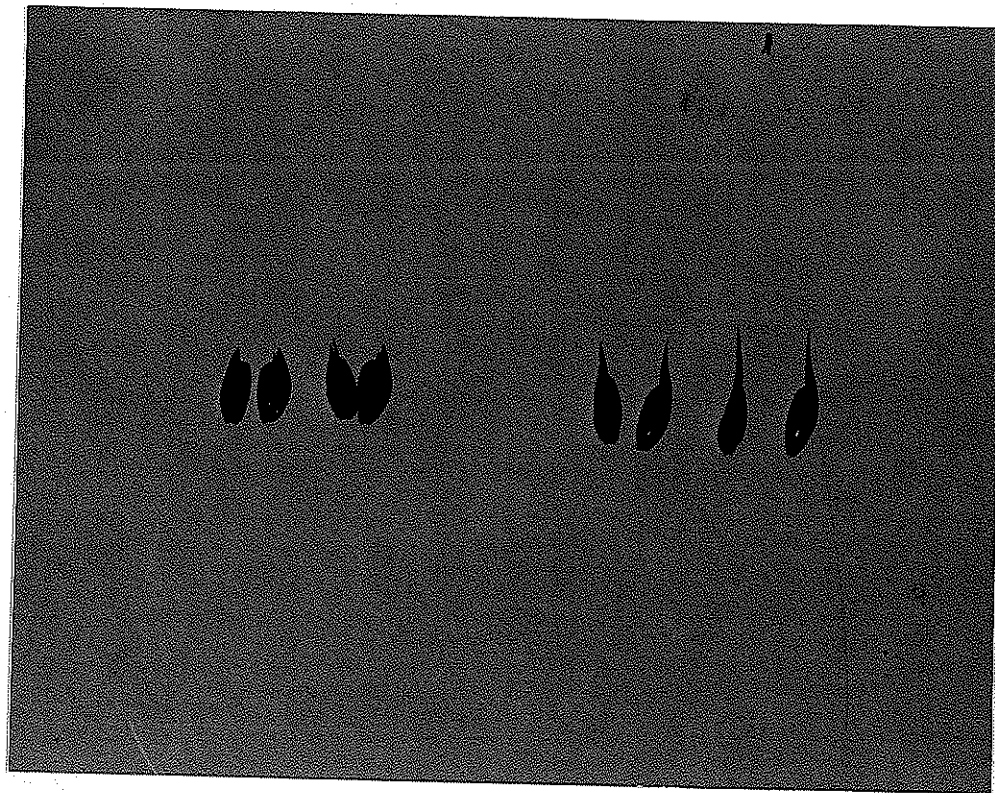
A variant that is similar to Sharpshooter but is 8 to 12 cm taller occurs at a frequency of up to .01% (1 per 10,000 plants). Otherwise, Sharpshooter is a stable and uniform variety in agronomic appearance and performance across generations (F6 through F10). Agronomic and quality data are presented in Tables 1 through 4.

16.b. Exhibit B. Statement of Distinctness

Sharpshooter is most similar to the variety Sharp. However, Sharpshooter is more tolerant to scab infection (*Fusarium graminearum*). Table 1 shows the % infected seed of Sharpshooter to be significantly less than Sharp in paired plots ($t=3.78$ w/3 d.f., $p<.05$ and $t=3.43$ w/4 d.f., $p<.05$ for the years 1995 and 1996 respectively. Table 2 shows a colorimeter comparison of paired samples of Sharpshooter and Sharp. Kernels of Sharpshooter are less bright (fewer infected, white, "Tombstone" kernels) $t=5.02$ w/10 d.f., $p<.001$ and redder in color, $t=5.74$ w/10 d.f., $p<.001$. See Figure 1 as an example.

Also, the beak length on Sharpshooter is much shorter than on Sharp (see Figure 2).

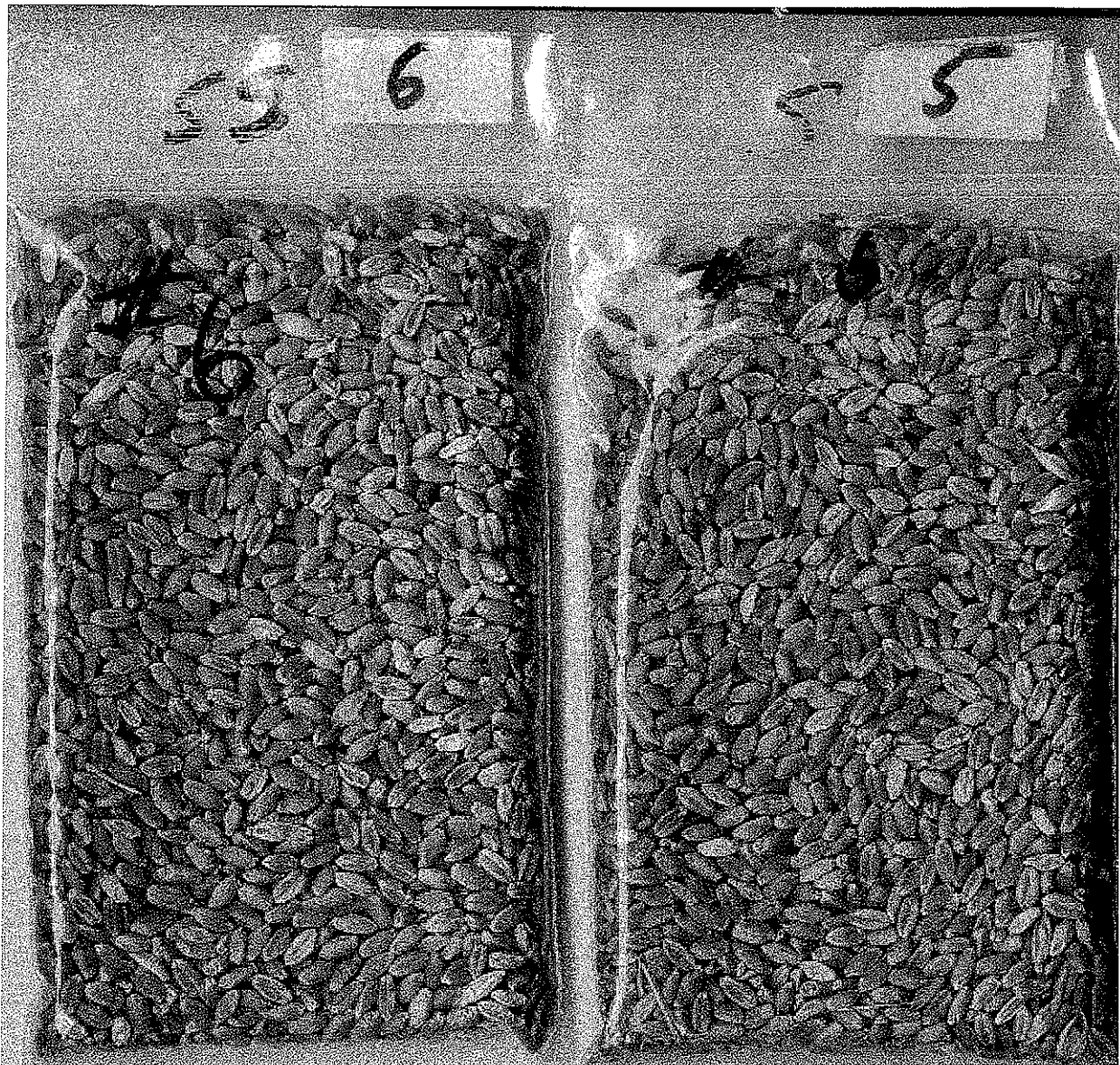
The above comparisons, along with a complete objective description (16.c.), show Sharpshooter to be a novel variety of hard red spring wheat.



Sharpshooter

Sharp

Figure 2. Comparison of the glume beaks of Sharpshooter and Sharp.



SHARPSHOOTER

SHARP

ColorColorLaLa

48.75

5.50

49.31

5.35

L = brightness

a = redness

Figure 1. Color comparison of Sharpshooter and Sharp seed grown as paired plots under infection of scab (*Fusarium graminearum*).

Table 1. Percent scabby seed, in inoculated paired plot field trials, of Sharpshooter compared to Sharp in Western Plant Breeder's trials at Fisher, MN during 1995 and 1996.

		% Scabby Seed (Tombstones)		
	Pair #	Sharpshooter	Sharp	
1995	1	19.6	40.3	t= 3.78 w/3 d.f. p<.05
	2	18.5	58.6	
	3	21.7	35.8	
	4	<u>20.0</u>	<u>35.6</u>	
	mean	19.9	42.6	
1996	5	0.8	2.0	t= 3.43 w4 d.f. p<.05
	6	0.8	1.7	
	7	0.9	2.6	
	8	1.0	1.6	
	9	<u>1.0</u>	<u>4.0</u>	
	mean	0.9	2.4	

Sharpshooter

Table 2. Seed color comparison of Sharpshooter and Sharp from paired plots infected with scab.

Pair #	Location/year	"L" (brightness)		diff	diff ²	"a" (redness)		diff	diff ²
		Sharp	Sharpshooter			Sharp	Sharpshooter		
1	F-96 yt	51.77	50.44	1.33	1.77	5.51	5.81	-0.30	0.09
2	F-96 -32(17&18)	51.14	50.63	0.51	0.26	5.52	5.88	-0.36	0.13
3	F-96 -33(19&20)	51.55	49.82	1.73	2.99	5.60	6.11	-0.51	0.26
4	F-96 -22-7&19-12	51.01	50.66	0.35	0.12	5.49	5.57	-0.08	0.01
5	F-96-19-18&21-11	50.79	50.26	0.53	0.28	5.44	5.99	-0.55	0.30
6	F-96 -21-17&20-8	51.53	50.38	1.15	1.32	5.74	5.98	-0.24	0.06
7	F-97-293&294	49.34	49.08	0.26	0.07	5.18	5.44	-0.26	0.07
8	Cr-97	49.09	48.70	0.39	0.15	5.30	5.58	-0.28	0.08
9	Am. Sci-97	49.28	48.93	0.35	0.12	5.17	5.24	-0.07	0.00
10	F-97	49.31	48.75	0.56	0.31	5.35	5.50	-0.15	0.02
11	R-97	49.35	48.05	1.30	1.69	5.12	5.30	-0.18	0.03
	mean	50.38	49.61	8.46	9.09	5.40	5.67	-2.98	1.05
			sum	0.76909				-0.27	

t = 5.02.

p < .001 w/10 d.f.

t = 5.74

p < .001 w/10 d.f.

Note: A higher percent of the Sharp kernels were infected with scab, creating more "tombstones" which are whiter in color. This reflects more light, resulting in a higher "L" value, and fewer normal kernels, and so a lower "a" or reddish color.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S)

Western Plant Breeders, Inc.

ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code)

8111 Timberline Drive

Bozeman, MT 59718-8184

FOR OFFICIAL USE ONLY

PVPO NUMBER 9800370

VARIETY NAME

Sharpshooter

TEMPORARY OR EXPERIMENTAL
DESIGNATION

SS-1, FA 994-601

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. or) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____
Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

1

1=Common

2=Durum

3=Club

4=Other (SPECIFY) _____

2. VERNALIZATION:

1

1=Spring

2=Winter

3=Other (SPECIFY) _____

3. COLEOPTILE ANTHOCYANIN:

1

1=Absent

2=Present

4. JUVENILE PLANT GROWTH:

2

1=Prostrate

2=Semi-erect

3=Erect

5. PLANT COLOR (boot stage):

2

1 = Yellow-Green

2 = Green

3 = Blue-Green

6. FLAG LEAF (boot stage):

1

1 = Erect

2 = Recurved

2

1 = Not Twisted

2 = Twisted

7. EAR EMERGENCE:

0 4

Number of Days Earlier Than Chris

0 1

Number of Days Later Than Butte 86

8. ANTHOR COLOR:

1

1 = YELLOW

2 = PURPLE

9. PLANT HEIGHT (from soil to top of head, excluding awns):

0 2

cm Taller Than Butte 86

0 9

cm Shorter Than Chris

10. STEM:

A. ANTHOCYANIN

☐ 1 = Absent 2 = Present

B. WAXY BLOOM

☐ 2 1 = Absent 2 = Present

C. HAIRINESS (last internode of rachis)

☐ 2 1 = Absent 2 = Present

D. INTERNODE (SPECIFY NUMBER)

☐ 1 1 = Hollow 2 = Semi-solid 3 = Solid 04

E. PEDUNCLE

☐ 2 1 = Absent 2 = Present

☐ 40 cm Length

11. HEAD (at Maturity):

A. DENSITY

☐ 1 1 = Lax 2 = Middense 3 = Dense

B. SHAPE

☐ 2 1 = Tapering 2 = Strap 3 = Clavate 4 = Other (SPECIFY) _____

C. CURVATURE

☐ 2 1 = Erect 2 = Inclined 3 = Recurved

D. AWNEDNESS

☐ 4 1 = Awnless 2 = Apically Awnletted 3 = Awnletted 4 = Awned

12. GLUMES (at Maturity):

A. COLOR

☐ 2 1 = White 2 = Tan 3 = Other (SPECIFY) _____

B. SHOULDER

☐ 4 1 = Wanting 2 = Oblique 3 = Rounded 4 = Square 5 = Elevated 6 = Apiculate

C. BEAK

☐ 3 1 = Obtuse 2 = Acute 3 = Acuminate

D. LENGTH

☐ 1 1 = Short (ca. 7mm) 2 = Medium (ca. 8mm) 3 = Long (ca. 9mm)

E. WIDTH

☐ 2 1 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm) 3 = Wide (ca. 4mm)

13. SEED:

A. SHAPE

☐ 3 1 = Ovate 2 = Oval 3 = Elliptical

B. CHEEK

☐ 1 1 = Rounded 2 = Angular

C. BRUSH

☐ 1 1 = Short 2 = Medium 3 = Long

D. CREASE

☐ 1 1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

☐ 1 1 = Not Collared 2 = Collared

☐ 2 1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

13. SEED: (continued)

E. COLOR

☒ 3

1 = White

2 = Amber

3 = Red

4 = Other (SPECIFY) _____

F. TEXTURE

☒ 1

1=Hard

2=Soft

G. PHENOL REACTION (see instructions):

☒ 0

1 = Ivory

2 = Fawn

3 = Light Brown

4 = Dark Brown

5 = Black

14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)
PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTEDStem Rust (*Puccinia graminis* f. sp. *tritici*)☒ 2

Prevalent

Leaf Rust (*Puccinia recondita* f. sp. *tritici*)☒ 2

Prevalent

Stripe Rust (*Puccinia striiformis*)☐ 0Loose Smut (*Ustilago tritici*)☐ 0Tan Spot (*Pyrenophora tritici-repentis*)☐ 0Flag Smut (*Urocystis agropyri*)☐ 0Halo Spot (*Selenophoma donacis*)☐ 0Common Bunt (*Tilletia tritici* or *T. laevis*)☐ 0

Septoria nodorum (Glume Blotch)

☐ 0Dwarf Bunt (*Tilletia controversa*)☐ 0

Septoria avenae (Speckled Leaf Disease)

☐ 0Karnal Bunt (*Tilletia indica*)☐ 0

Septoria tritici (Speckled Leaf Blotch)

☐ 0Powdery Mildew (*Erysiphe graminis* f. sp. *tritici*)☐ 0Scab (*Fusarium* spp.)☒ 2

relative resistance (tolerance)

"Snow Molds"

☐ 0

"Black Point" (Kernel Smudge)

☐ 0Common Root Rot (*Fusarium*, *Cochliobolus* and *Bipolaris* spp.)☐ 0

Barley Yellow Dwarf Virus (BYDV)

☐ 0Rhizoctonia Root Rot (*Rhizoctonia solani*)☐ 0

Soilborne Mosaic Virus (SBMV)

☐ 0Black Chaff (*Xanthomonas campestris* pv. *translucens*)☐ 0

Wheat Yellow (Spindle Streak) Mosaic Virus

☐ 0Bacterial Leaf Blight (*Pseudomonas syringae* pv. *syringae*)☐ 0

Wheat Streak Mosaic Virus (WSMV)

☐ 0

Other (SPECIFY) _____

☐ 0

Other (SPECIFY) _____

☐ 0

Other (SPECIFY) _____

☐ 0

Other (SPECIFY) _____

☐ 0

Other (SPECIFY) _____

☐ 0

Other (SPECIFY) _____

☐ 0

Other (SPECIFY) _____

☐ 0

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

Exhibit C (Wheat) Page

PLEASE SPECIFY BIOTYPE (where needed)

9800370

Hessian Fly (*Mayetiola destructor*)

☐ 0

Stem Sawfly (*Cephus* spp.)

☐ 1

Cereal Leaf Beetle (*Oulema melanopa*)

☐ 0

Russian Aphid (*Diuraphis noxia*)

☐ 0

Greenbug (*Schizaphis graminum*)

☐ 0

Aphids

☐ 0

Other (SPECIFY) _____

☐ 0

Other (SPECIFY) _____

☐ 0

Other (SPECIFY) _____

☐ 0

Other (SPECIFY) _____

☐ 0

Other (SPECIFY) _____

☐ 0

Other (SPECIFY) _____

☐ 0

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

28 JUN 31 1982

0207

SHARPSHOOTER

Table 4. Quality evaluation of Sharpshooter compared to check varieties in the 1996 UNIFORM REGIONAL SPRING NURSERY

NORTHEAST: Carrington, Langdon, Prosper, Crookston SOUTHEAST: Selby, Grotown, Brookings, St. Paul MIDWEST: Minot, Williston, Dickinson, Sidney, Powell WEST: Havre, Bozeman, Pullman														
VARIETY	TW lb/bu	NIR Hard- ness	WHEAT (14 % mb)		FLOUR EXT (%)	FLOUR (14% mb)		MIX PAT	BAKE ABS	MIX TIME (min)	D C	C G	C T	LOAF VAL (cc)
			PRO	ASH		PRO	ASH							
Northeast														
Butte 86	59.7	73.6	15.0	1.74	61.8	14.1	0.36	3.2	61.1	3.15	2.4	4.0	3.8	5.6
Chris	58.6	72.2	15.0	1.72	61.3	14.5	0.38	3.2	61.0	3.40	2.8	3.2	4.0	5.0
Era	57.9	67.0	13.6	1.74	63.3	12.7	0.43	2.6	58.9	3.90	2.6	2.6	3.6	5.0
Stoa	57.0	68.6	15.3	1.84	61.3	14.6	0.39	3.6	61.6	3.65	2.8	3.6	4.4	5.4
Sharpshooter	62.2	61.5	14.7	1.70	59.6	14.1	0.35	2.8	58.7	2.95	2.4	3.6	3.6	5.8
Southeast														
Butte 86	61.8	84.7	13.6	1.70	61.9	11.9	0.38	2.5	61.0	3.19	2.0	3.5	5.0	4.8
Chris	61.1	81.4	14.1	1.66	61.3	13.3	0.40	2.5	61.8	3.50	2.5	3.0	3.0	5.0
Era	61.1	79.9	12.6	1.68	62.2	11.1	0.42	2.5	60.9	4.13	2.3	3.0	3.3	4.3
Stoa	60.3	75.9	13.3	1.69	63.1	12.0	0.38	3.0	60.7	4.50	2.3	3.3	4.8	5.3
Sharpshooter	63.8	71.9	13.4	1.63	58.2	12.3	0.33	2.5	60.0	3.44	2.5	4.8	2.8	5.5
Midwest														
Butte 86	62.5	82.0	12.6	1.46	56.6	11.2	0.34	2.6	59.7	3.80	2.2	3.6	4.6	3.4
Chris	60.6	83.5	14.2	1.46	56.7	13.4	0.36	2.8	58.5	3.75	3.0	3.0	3.8	4.5
Era	61.5	78.9	12.1	1.45	55.2	10.8	0.39	2.2	56.6	4.85	1.8	3.4	3.6	3.4
Stoa	61.0	79.1	13.1	1.50	55.5	12.1	0.34	2.8	60.0	4.65	2.2	3.8	3.8	3.8
Sharpshooter	63.6	64.4	12.8	1.40	52.8	12.0	0.31	2.6	58.8	3.50	2.2	3.6	3.0	4.2
West														
Butte 86	61.5	87.3	14.8	1.31	62.1	13.8	0.31	3.0	59.6	3.83	2.3	2.7	5.0	4.7
Chris	59.2	78.1	15.3	1.42	63.6	14.7	0.34	3.0	59.9	3.75	2.7	2.7	5.0	4.3
Era	59.9	76.8	13.9	1.40	61.4	12.9	0.35	2.3	56.9	5.00	2.0	3.7	4.3	4.0
Stoa	60.2	74.0	14.5	1.36	62.3	13.7	0.32	3.3	61.6	4.33	2.7	2.3	4.3	4.7
Sharpshooter	63.1	66.4	14.3	1.29	55.0	13.8	0.28	3.0	60.1	3.08	2.3	3.7	3.7	5.0

RATINGS:

	0		3		6	
	DOUGH CHAR (DC): CRUMB COLOR (CC): CRUMB GRAIN (CG): CRUMB TEXTURE (CT):	STICKY-WEAK YELLOW IRREG, THICK HARSH	PLIABLE GREY	ELASTIC DULL OPEN, THICK COARSE	CREAMY	BUCKY BRIGHT WHITE FINE SILKY

9800370

Sharpshooter

Exhibit D per AAA 21 Oct 1999

Table 3. Scab evaluations from the 1996 Uniform Regional Hard Red Spring Wheat Nursery grown at St. Paul and Morris, MN.

<u>Entry</u>	<u>St. Paul</u>				<u>Morris</u>
	<u>% Incidence</u>	<u>% Severity</u>	<u>% Disease</u>	<u>% Tombstone</u>	<u>% Tombstone</u>
Sharpshooter	34	21	8	8	10
Marquis	71	80	64	19	21
Chris	80	66	49	27	15
Era	30	29	9	22	30
Stoa	55	54	32	18	23
Butte 86	51	19	10	12	14

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

STD-470-E (03-96)